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ASSOCIATION BETWEEN NUMBER OF LIVE BIRTHS AND MARKERS OF SUBCLINICAL ATHEROSCLEROSIS: THE DALLAS HEART STUDY

Moderated Poster Contributions
Hall C
Saturday, March 29, 2014, 3:45 p.m.-4:00 p.m.

Session Title: Prevention: Risk Predictors, Subclinical Atherosclerosis, and Resistent Hypertension
Abstract Category: 20. Prevention: Clinical
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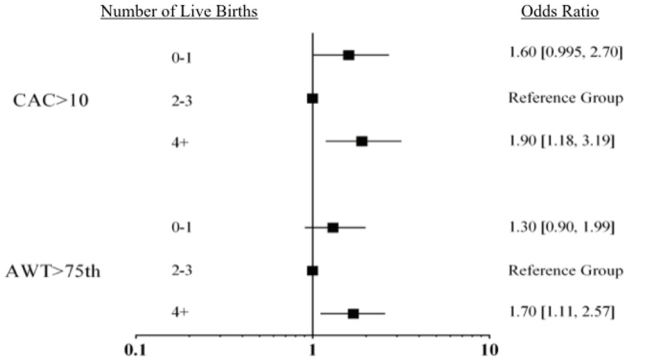
Background: Higher parity has been associated with increased maternal risk of cardiovascular (CV) disease, but the mechanism is not fully delineated. Whether the number of live births is associated with coronary artery calcification (CAC) and aortic wall thickness (AWT) has not been evaluated.

Methods: Women from the Dallas Heart Study, a multiethnic population-based cohort of subjects aged 30-65, were included if they had self-reported data on number of live births and CAC measured by CT or AWT by MRI. CAC was positive if >10, and AWT if greater than the 75th percentile for age and gender.

Results: Among the 1331 women included in the study, the mean age was 41 years and 53% were black. Increased number of live births was associated with older age, Hispanic race, hypertension, higher BMI, and lower socioeconomic status ($p<0.003$ for each). Using women with 2-3 live births as the reference, those with 4 or more live births had an increased prevalence of CAC and AWT (OR 2.9 and 1.7, respectively; $p<0.002$ for each), which remained significant after multivariable adjustment (Figure). Women with 0-1 live births also had increased CAC (OR 1.5, $p<0.05$) and a trend towards increased AWT (OR 1.2, $p=0.3$), but neither was statistically significant after adjustment.

Conclusion: Number of live births is associated with subclinical coronary and aortic atherosclerosis, with an apparent U-shaped relationship. Further studies are needed to confirm this association and explore the biological underpinnings of these findings.

Association between Number of Live Births and Markers of Subclinical Atherosclerosis after Multivariable Adjustment*



*Adjusted for age, race, income, education, hypertension, high cholesterol, low HDL, triglycerides, smoking, diabetes, and BMI